

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) An amplitude limiting circuit for limiting an amplitude of a signal input to a power amplifier, comprising:
 - an amplitude converter which calculates an amplitude value of an input signal;
 - a determination unit which detects, as a detection interval, an interval in which the amplitude value exceeds a threshold, on ~~the~~ basis of a preset threshold and the amplitude value of the input signal;
 - a peak detector which detects, in the detection interval, ~~a~~ peak time when a maximum amplitude value appears and ~~an~~said maximum amplitude value at the peak time as a peak value;
 - a window filter which generates a window function for limiting the amplitude value to a value not more than the threshold by using the peak value output from said peak detector;
 - a delay circuit which delays the input signal such that the peak time output from said peak detector coincides with ~~a~~ time when the window function output from said window filter exhibits a minimum value; and
 - a multiplier which multiplies an output signal from said delay circuit by the window function.
2. (Original) A circuit according to claim 1, wherein said determination unit comprises
 - an amplitude comparing section which compares the preset threshold with the amplitude value of the input signal, and
 - an interval detecting section which detects an interval in which the amplitude value

exceeds the threshold.

3. (Currently Amended) A circuit according to claim 1, wherein

 | said ~~window filter~~ outputs a window function ~~which~~ exhibits a value of 1 before and
 | after a preset correction interval longer than the detection interval and makes a value at ~~the~~
 | center of the correction interval proportional to ~~the~~ reciprocal of the peak value, and
 |
 | said delay circuit delays the input signal such that the peak time coincides with the
 | center of the correction interval.

4. (Currently Amended) A circuit according to claim 3, wherein said ~~window filter~~
 | ~~outputs a window function exhibiting~~ exhibits a value which is 1 until the peak value and
 | becomes not more than a value (threshold/peak value) at the center of the correction interval
 | after the peak time.

5. (Original) A circuit according to claim 3, wherein

 | letting threshold/peak value A, $a = (1 - A)/2$, and τ be a value 1/2 a preset correction
 | interval, said window filter outputs a window function $w(t)$ represented by

$$w(t) = \begin{cases} 1 - a(1 - \cos(\pi t/\tau)) & (0 < t < 2\tau) \\ 1 & (t < 0, 2\tau < t) \end{cases}$$

and

 | said delay circuit delays the input signal by the time τ .

6. (Original) A circuit according to claim 1, further comprising a threshold input section which inputs a threshold to said determination unit.

7. (Canceled)

8. (Original) An apparatus according to claim 7, A CDMA communication apparatus comprising:

a plurality of filters which pass predetermined band components containing input signals;

a plurality of first frequency converters which convert the signals passing through said filters into signals with different frequencies for the respective channels;

a carrier combining unit which combines the output signals from said first frequency converters;

an amplitude limiting circuit which limits an amplitude of an output signal from said carrier combining unit, said amplitude limiting circuit comprising:

wherein

said amplitude limiting circuit comprises

an amplitude converter which calculates an amplitude value of an input signal,

a determination unit which detects, as a detection interval, an interval in which the amplitude value exceeds a threshold, on ~~the~~ basis of a preset threshold and the amplitude value of the input signal,

a peak detector which detects, in the detection interval, a peak time when a maximum amplitude value appears and an amplitude value at the peak time as a peak value,

a window filter which generates a window function for limiting the amplitude value to a value not more than the threshold by using the peak value output from said peak detector,

a delay circuit which delays the input signal such that the peak time output from said peak detector coincides with a time when the window function output from said window filter exhibits a minimum value, and

a multiplier which multiplies an output signal from said delay circuit by the window function.function:

a D/A converter which converts an output signal from said amplitude limiting circuit into an analog signal;

a second frequency converter which converts the analog signal into an RF signal; and
a transmission power amplifier which amplifies the RF signal to power necessary for
a transmission, and wherein

said delay circuit delays said input signal by a lapse time τ , where τ comprises a value
set in advance to half a value corresponding to a time longer than an interval in which said
input signal exceeds said threshold.

9. (New) A circuit according to claim 1, wherein said input signal comprises an in phase component I and a quadrature component Q, and said amplitude value of said input signal comprises $(I^2 + Q^2)^{1/2}$.

10. (New) An apparatus according to claim 8, wherein τ further comprises a value between 10 and 20 times a chip period used, where said chip period is a reciprocal of a

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spreading frequency used in said CDMA communication apparatus.

11. (New) An apparatus according to claim 10, wherein said window function comprises
w(t) represented by

$$w(t) = \begin{cases} 1 - a(1 - \cos(\pi t/\tau)) & (0 < t < 2\tau) \\ 1 & (t < 0, 2\tau < t), \end{cases}$$

and

said delay circuit delays the input signal by a time τ .